

Proline Promass A 100 Coriolis flowmeter

The single-tube flowmeter for smallest flow quantities with an ultra-compact transmitter



Benefits:

- Highest process safety – self-drainable measuring tube design
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Space-saving installation – no in/outlet run needs
- Space-saving transmitter – full functionality on the smallest footprint
- Time-saving local operation without additional software and hardware – integrated web server
- Integrated verification – Heartbeat Technology

Specs at a glance

- **Max. measurement error** Mass flow (liquid): ± 0.1 % Volume flow (liquid): ± 0.1 % Mass flow (gas): ± 0.5 % Density (liquid): ± 0.0005 g/cm³
- **Measuring range** 0 to 450 kg/h (0 to 16.5 lb/min)
- **Medium temperature range** -50 to +205 °C (-58 to +401 °F)
- **Max. process pressure** PN 40, Class 300, 20K, 400 bar (5800 psi)
- **Wetted materials** Measuring tube: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022) Connection: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022); 1.4404 (316/316L)

Field of application: Promass A is known for its highly accurate measurement of small quantities of liquids and gases for high pressure and low pressure. Combined with the smallest transmitter housing available today it delivers full performance on the smallest footprint. Promass A 100 is the preferred choice for system integrators, skid builders and equipment manufacturers. Available with an ultra-compact

stainless steel hygienic housing it can be placed even into the most compact rigs.

Features and specifications

Liquids

Measuring principle

Coriolis

Product headline

The single-tube flowmeter for smallest flow quantities with an ultra-compact transmitter.

Measuring accurately smallest quantities of liquids and gases for continuous process control.

Sensor features

Highest process safety – self-drainable measuring tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs.

Nominal diameter: DN 1 to 4 ($\frac{1}{24}$ to $\frac{1}{8}$ "). Process pressure up to 400 bar (5800 psi). Medium temperature up to +205 °C (+401 °F).

Transmitter features

Space-saving transmitter – full functionality on the smallest footprint.

Time-saving local operation without additional software and hardware – integrated web server. Integrated verification – Heartbeat Technology.

Robust, ultra-compact transmitter housing. Highest degree of protection: IP69. Local display available.

Nominal diameter range

DN 1 to 4 ($\frac{1}{24}$ to $\frac{1}{8}$ ")

Wetted materials

Measuring tube: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022)

Connection: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022); 1.4404 (316/316L)

Liquids

Measured variables

Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

Max. measurement error

Mass flow (liquid): ± 0.1 %

Volume flow (liquid): ± 0.1 %

Mass flow (gas): ± 0.5 %

Density (liquid): ± 0.0005 g/cm³

Measuring range

0 to 450 kg/h (0 to 16.5 lb/min)

Max. process pressure

PN 40, Class 300, 20K, 400 bar (5800 psi)

Medium temperature range

-50 to +205 °C (-58 to +401 °F)

Ambient temperature range

Standard: -40 to +60 °C (-40 to +140 °F)

Option: -50 to +60 °C (-58 to +140 °F)

Sensor housing material

1.4301 (304), corrosion resistant

Transmitter housing material

Compact: AlSi10Mg, coated

Compact/ultra-compact: 1.4301 (304)

Degree of protection

Standard: IP66/67, type 4X enclosure

Option: IP69

Display/Operation

4-line backlit display available (no local operation)

Configuration via web browser and operating tools possible

Liquids

Outputs

4-20 mA HART (active)

Pulse/frequency/switch output (passive)

Inputs

None

Digital communication

HART, Modbus RS485, EtherNet/IP, PROFIBUS DP, PROFINET

Power supply

DC 20 to 30 V

Hazardous area approvals

ATEX, IECEx, cCSAus, INMETRO, NEPSI, EAC

Product safety

CE, C-Tick, EAC marking

Metrological approvals and certificates

Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR

Heartbeat Technology complies with the requirements for measurement traceability according to ISO 9001:2015 – Section 7.1.5.2 a (TÜV SÜD attestation)

Pressure approvals and certificates

CRN

Material certificates

3.1 material

Hygienic approvals and certificates

3-A, EHEDG, cGMP

Gas

Measuring principle

Coriolis

Gas

Product headline

The single-tube flowmeter for smallest flow quantities with an ultra-compact transmitter.

Measuring accurately smallest quantities of liquids and gases for continuous process control.

Sensor features

Highest process safety – self-drainable measuring tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs.

Nominal diameter: DN 1 to 4 ($\frac{1}{24}$ to $\frac{1}{8}$ "). Process pressure up to 400 bar (5800 psi). Medium temperature up to +205 °C (+401 °F).

Transmitter features

Space-saving transmitter – full functionality on the smallest footprint. Time-saving local operation without additional software and hardware – integrated web server. Integrated verification – Heartbeat Technology. Robust, ultra-compact transmitter housing. Highest degree of protection: IP69. Local display available.

Nominal diameter range

DN 1 to 4 ($\frac{1}{24}$ to $\frac{1}{8}$ ")

Wetted materials

Measuring tube: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022)

Connection: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022); 1.4404 (316/316L)

Measured variables

Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

Max. measurement error

Mass flow (liquid): ± 0.1 %

Volume flow (liquid): ± 0.1 %

Mass flow (gas): ± 0.5 %

Density (liquid): ± 0.0005 g/cm³

Gas

Measuring range

0 to 450 kg/h (0 to 16.5 lb/min)

Max. process pressure

PN 40, Class 300, 20K, 400 bar (5800 psi)

Medium temperature range

–50 to +205 °C (–58 to +401 °F)

Ambient temperature range

Standard: –40 to +60 °C (–40 to +140 °F)

Option: –50 to +60 °C (–58 to +140 °F)

Sensor housing material

1.4301 (304), corrosion resistant

Transmitter housing material

Compact: AlSi10Mg, coated

Compact/ultra-compact: 1.4301 (304)

Degree of protection

Standard: IP66/67, type 4X enclosure

Option: IP69

Display/Operation

4-line backlit display available (no local operation)

Configuration via web browser and operating tools possible

Outputs

4-20 mA HART (active)

Pulse/frequency/switch output (passive)

Inputs

None

Digital communication

HART, Modbus RS485, EtherNet/IP, PROFIBUS DP, PROFINET

Gas**Power supply**DC 20 to 30 V

Hazardous area approvalsATEX, IECEx, cCSAus, INMETRO, NEPSI, EAC

Other approvals and certificates

Product safetyCE, C-Tick, EAC marking

Metrological approvals and certificates

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Pressure approvals and certificatesCRN

Material certificates3.1 material

Hygienic approvals and certificates3-A, EHEDG, cGMP

Density/Concentration**Measuring principle**Coriolis

Product headline

The single-tube flowmeter for smallest flow quantities with an ultra-compact transmitter.

Measuring accurately smallest quantities of liquids and gases for continuous process control.

Density/Concentration

Sensor features

Highest process safety – self-drainable measuring tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs. Nominal diameter: DN 1 to 4 ($\frac{1}{24}$ to $\frac{1}{8}$ "). Process pressure up to 400 bar (5800 psi). Medium temperature up to +205 °C (+401 °F).

Transmitter features

Space-saving transmitter – full functionality on the smallest footprint. Time-saving local operation without additional software and hardware – integrated web server. Integrated verification – Heartbeat Technology. Robust, ultra-compact transmitter housing. Highest degree of protection: IP69. Local display available.

Nominal diameter range

DN 1 to 4 ($\frac{1}{24}$ to $\frac{1}{8}$ ")

Wetted materials

Measuring tube: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022)
Connection: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022); 1.4404 (316/316L)

Measured variables

Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

Max. measurement error

Mass flow (liquid): ± 0.1 %
Volume flow (liquid): ± 0.1 %
Mass flow (gas): ± 0.5 %
Density (liquid): ± 0.0005 g/cm³

Measuring range

0 to 450 kg/h (0 to 16.5 lb/min)

Max. process pressure

PN 40, Class 300, 20K, 400 bar (5800 psi)

Density/Concentration**Medium temperature range**

–50 to +205 °C (–58 to +401 °F)

Ambient temperature range

Standard: –40 to +60 °C (–40 to +140 °F)

Option: –50 to +60 °C (–58 to +140 °F)

Sensor housing material

1.4301 (304), corrosion resistant

Transmitter housing material

Compact: AlSi10Mg, coated

Compact/ultra-compact: 1.4301 (304)

Degree of protection

Standard: IP66/67, type 4X enclosure

Option: IP69

Display/Operation

4-line backlit display available (no local operation)

Configuration via web browser and operating tools possible

Outputs

4–20 mA HART (active)

Pulse/frequency/switch output (passive)

Inputs

None

Digital communication

HART, Modbus RS485, EtherNet/IP, PROFIBUS DP, PROFINET

Power supply

DC 20 to 30 V

Hazardous area approvals

ATEX, IECEx, cCSAus, INMETRO, NEPSI, EAC

Density/Concentration

Product safety

CE, C-Tick, EAC marking

Metrological approvals and certificates

Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR

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Pressure approvals and certificates

CRN

Material certificates

3.1 material

Hygienic approvals and certificates

3-A, EHEDG, cGMP



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